

=> d his

(FILE 'HOME' ENTERED AT 08:51:10 ON 16 OCT 2002)

FILE 'HCAPLUS' ENTERED AT 08:51:26 ON 16 OCT 2002

L1 151 S JORGENSEN R?/AU
 L2 39 S OSTERGAARD S?/AU
 L3 91 S THEISEN M?/AU
 L4 342 S HOLM A?/AU
 L5 600 S L1-4
 L6 7 S L5 AND LIGAND/TI
 L7 3 S L6 AND ASSEMB?
 L8 1 S L7 AND LPA
 SELECT RN L8 1

+ inventor search

FILE 'REGISTRY' ENTERED AT 08:54:01 ON 16 OCT 2002

L9 42 S E1-42
 L10 11 S L9 AND SQL=10
 L11 3 S L10 AND "FLUOREN"
 L12 110 S PVVAESPK/SQSP
 L13 1 S L11 AND L12
 L14 1 S L12 AND "FLUOREN"

← and searched in Reg file

← requested seg

FILE 'HCAPLUS' ENTERED AT 09:06:14 ON 16 OCT 2002

L15 1 S L14 AND L8
 L16 2 S L14
 L17 1 S L16 NOT L15

1 cite w/ this seg in appl. work
 only other citation for this seg
 is this journal article by
 applicant

=> d ibib abs hitstr

L15. ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:227676 HCAPLUS
 DOCUMENT NUMBER: 132:250004
 TITLE: **Ligand presenting assembly (LPA)**, method of preparation and uses thereof
 INVENTOR(S): **Holm, Arne; Jorgensen, Rikke Malene; Ostergaard, Soren; Theisen, Michael**
 PATENT ASSIGNEE(S): Statens Serum Institut, Den.
 SOURCE: PCT Int. Appl., 100 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000018791	A1	20000406	WO 1999-DK510	19990929
W:		AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
RW:		GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG		
AU 9960783	A1	20000417	AU 1999-60783	19990929
EP 1117677	A1	20010725	EP 1999-947256	19990929
R:		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, IE, SI, LT, LV, FI, RO		
PRIORITY APPLN. INFO.:			DK 1998-1233	A 19980929
			WO 1999-DK510	W 19990929

OTHER SOURCE(S): MARPAT 132:250004

AB The present invention relates to a method for prepg. a Ligand Presenting **Assembly (LPA)**, an **LPA**, an immunol. compn. and a vaccine. The N-terminal of **LPA** is coupled to an achiral di, tri, or tetra-carboxylic acid so as to provide a construct having a ring structure. The invention further relates to a method for generating antibodies, a kit for use in diagnosis and use of an **LPA** for prepg. a pharmaceutical compn.

IT 262859-56-3P, LPA-I

RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

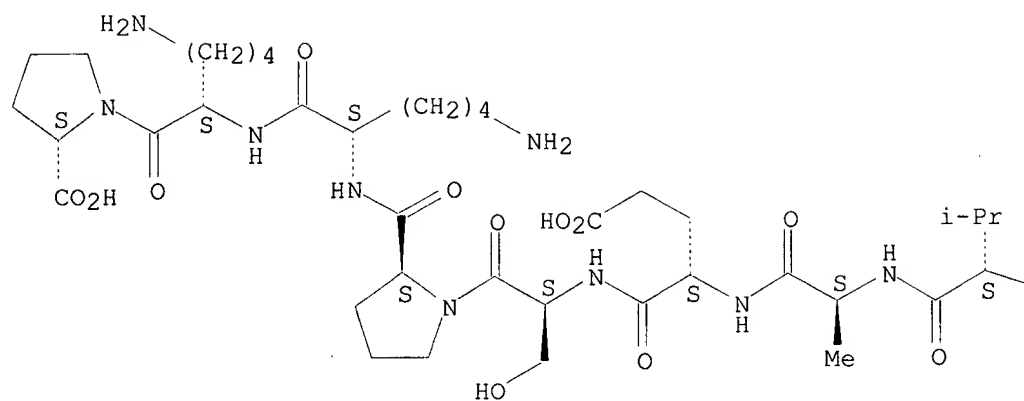
(ligand presenting **assembly** comprising achiral carboxylic acid-modified antigen as vaccine for diagnosis of infections)

RN 262859-56-3 HCAPLUS

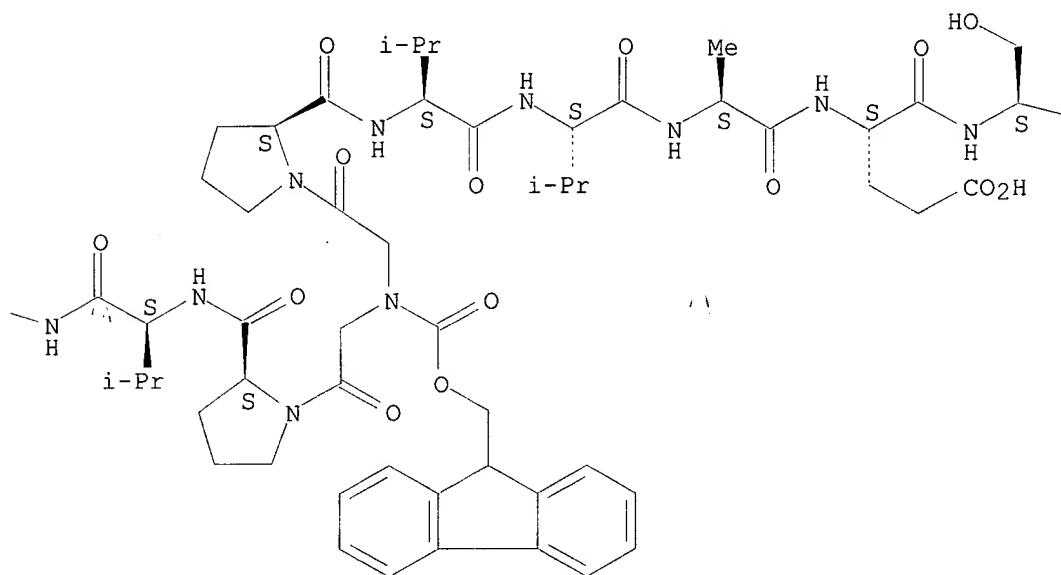
CN L-Proline, N-(carboxymethyl)-N-[(9H-fluoren-9-ylmethoxy)carbonyl]glycyl-L-prolyl-L-valyl-L-valyl-L-alanyl-L-.alpha.-glutamyl-L-seryl-L-prolyl-L-lysyl-L-lysyl-, (1.fwdarw.1')-amide with L-prolyl-L-valyl-L-valyl-L-alanyl-L-.alpha.-glutamyl-L-seryl-L-prolyl-L-lysyl-L-lysyl-L-proline (9CI) (CA INDEX NAME)

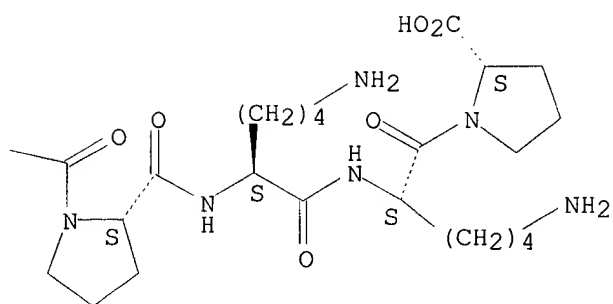
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





REFERENCE COUNT:

7

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:569091 HCAPLUS
 DOCUMENT NUMBER: 133:265384
 TITLE: Ligand-presenting assembly: a method for C- and N-terminal antigen presentation
 AUTHOR(S): Holm, A.; Jorgensen, R. M.; Ostergaard, S.; Theisen, M.
 CORPORATE SOURCE: Research Center for Medical Biotechnology, Chemistry Department, The Royal Veterinary and Agricultural University, Copenhagen, DK-1871, Den.
 SOURCE: Journal of Peptide Research (2000), 56(2), 105-113
 CODEN: JPERFA; ISSN: 1397-002X
 PUBLISHER: Munksgaard International Publishers Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Achiral dicarboxylic acids were coupled with 2 equiv. of the free .alpha.-amino groups of two fully side-chain protected peptide chains while these were still attached to a synthesis resin. Cleavage from the resin with simultaneous side-chain deprotection afforded two assembled peptide chains with free C-terminals. Suitable functionalization of the achiral dicarboxylic acid alternatively permitted continued peptide synthesis in a C to N orientation leading to a final peptide assembly which, after cleavage from the resin, may have multiple N to C and C to N presentation of one or more epitopes.

IT 262859-56-3P

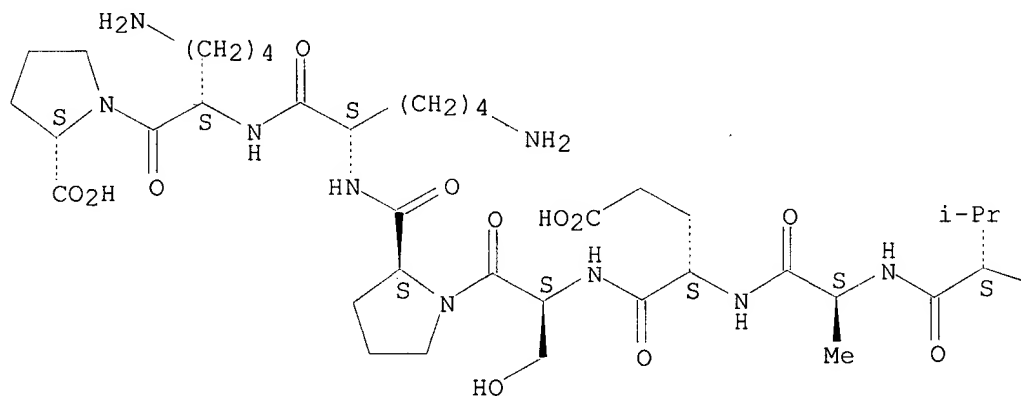
RL: ARG (Analytical reagent use); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (prepn. and application in ELISA)

RN 262859-56-3 HCAPLUS

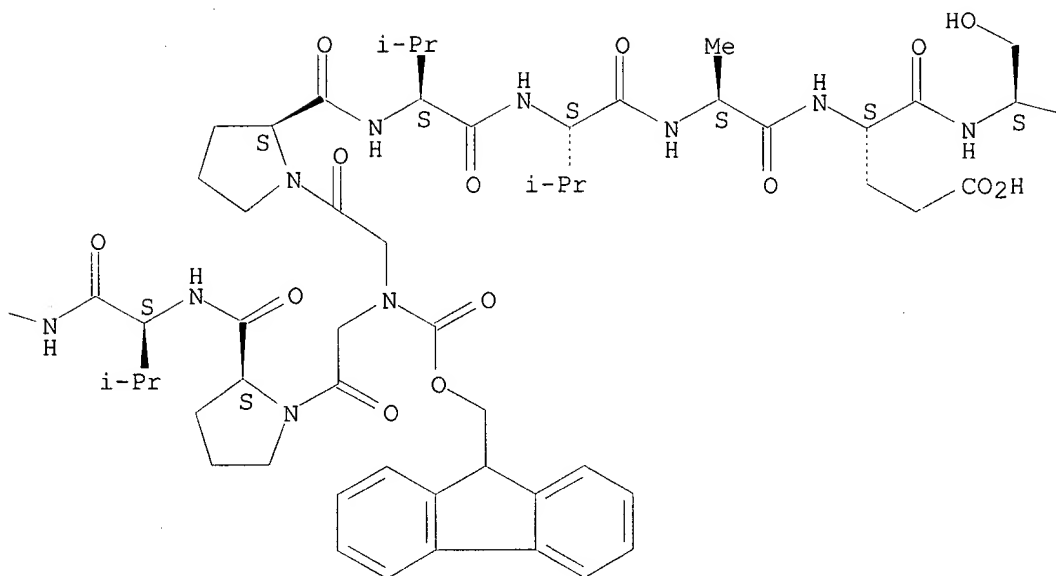
CN L-Proline, N-(carboxymethyl)-N-[(9H-fluoren-9-ylmethoxy)carbonyl]glycyl-L-prolyl-L-valyl-L-valyl-L-alanyl-L-.alpha.-glutamyl-L-seryl-L-prolyl-L-lysyl-L-lysyl-, (1.fwdarw.1')-amide with L-prolyl-L-valyl-L-valyl-L-alanyl-L-.alpha.-glutamyl-L-seryl-L-prolyl-L-lysyl-L-lysyl-L-proline (9CI) (CA INDEX NAME)

Absolute stereochemistry.

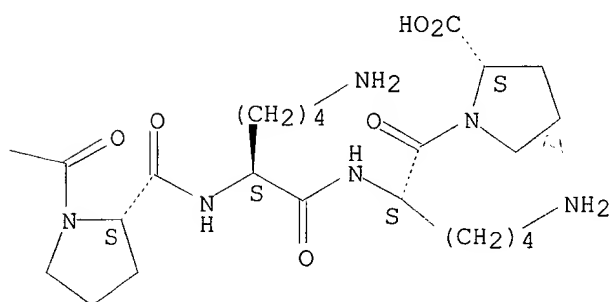
PAGE 1-A



PAGE 1-B



PAGE 1-C



REFERENCE COUNT:

16

THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L14 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN ~~262859-56-3~~ REGISTRY

CN L-Proline, N-(carboxymethyl)-N-[(9H-fluoren-9-ylmethoxy)carbonyl]glycyl-L-prolyl-L-valyl-L-valyl-L-alanyl-L-.alpha.-glutamyl-L-seryl-L-prolyl-L-lysyl-L-lysyl-, (1.fwdarw.1')-amide with L-prolyl-L-valyl-L-valyl-L-alanyl-L-.alpha.-glutamyl-L-seryl-L-prolyl-L-lysyl-L-lysyl-L-proline (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 33: PN: WO0018791 PAGE: 79 claimed sequence

CN LPA-I

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 21,11,10

NTE multichain

modified (modifications unspecified)

type	----- location -----	description
bridge	Gly-1 - Pro-1'	covalent bridge

PATENT ANNOTATIONS (PNTE):

Sequence |Patent

Source |Reference

=====+=====

Not Given|WO2000018791

|claimed PAGE

|79

SEQ 1 @PVVAESPCKK P

HITS AT: 2-9

SEQ 1 PVVAESPCKP

HITS AT: 1-8

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C115 H177 N25 O32

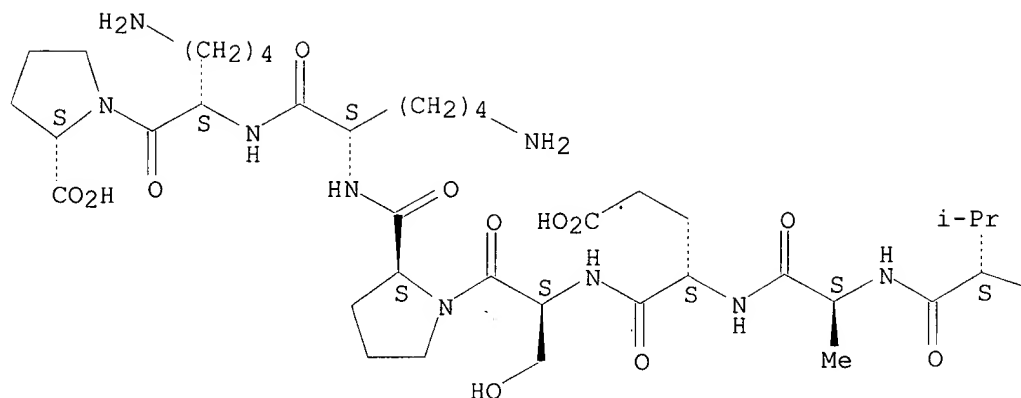
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

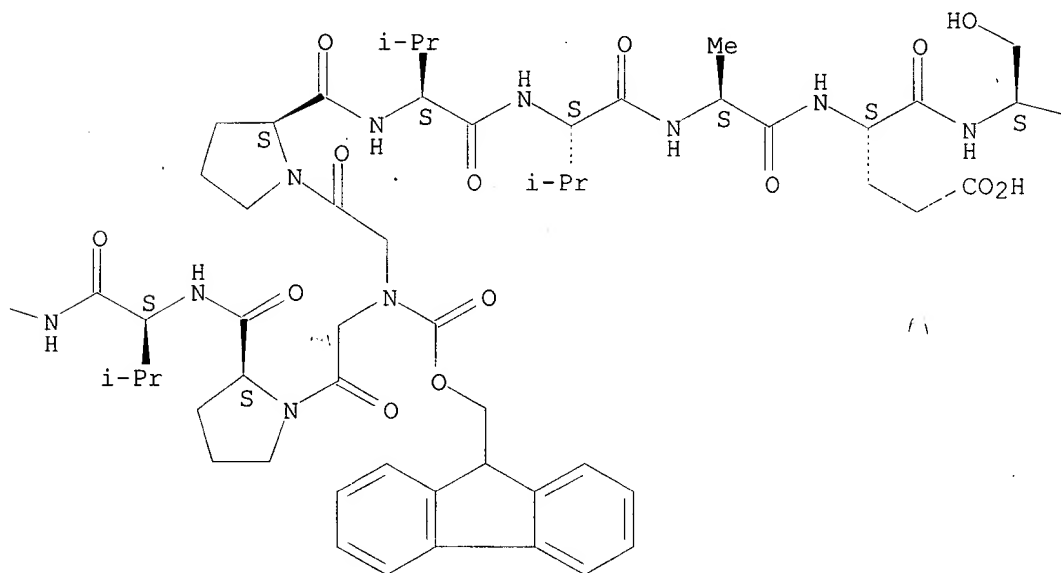
Absolute stereochemistry.

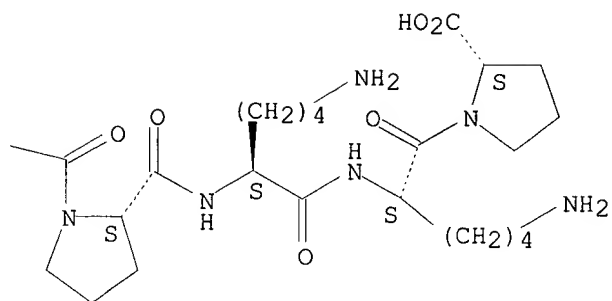
not part of SEQ ID 1, but the rest of it fits your request

PAGE 1-A



PAGE 1-B





2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

=>

Wed Oct 16 09:20:22 2002

US09408578A.pap

Page 1

Sequence 1, Application US/09408578A
GENERAL INFORMATION:
APPLICANT: Holm, Arne
APPLICANT: Jorgensen, Rikke Malene
APPLICANT: Ostergaard, Soren
APPLICANT: Theisen, Michael
TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
FILE REFERENCE: 162/P63882US0
CURRENT APPLICATION NUMBER: US/09/408,578A
PRIOR FILING DATE: 1998-09-29
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 1
LENGTH: 10
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Sequence
OTHER INFORMATION: derived from the Opc protein of Borrelia
US-09-408-578A-1

our
SEQ protein does not
indicate double chain

Sequence 2, Application US/09408578A
GENERAL INFORMATION:
APPLICANT: Holm, Arne
APPLICANT: Jorgensen, Rikke Malene
APPLICANT: Ostergaard, Soren
APPLICANT: Theisen, Michael
TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
FILE REFERENCE: 162/P63882US0
CURRENT APPLICATION NUMBER: US/09/408,578A
PRIOR FILING DATE: 1998-09-29
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 20
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: ESAT-6, 51-70
OTHER INFORMATION: sequence of Mycobacterium tuberculosis
US-09-408-578A-2
QLANLEETATADWKOQVGOYL

; Sequence 3, Application US/09408578A
; GENERAL INFORMATION:
; APPLICANT: Holm, Arne
; APPLICANT: Jorgensen, Rikke Malene
; APPLICANT: Ostergaard, Soren
; APPLICANT: Thelsen, Michael
; TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
; FILE REFERENCE: 162/P63882US0
; CURRENT APPLICATION NUMBER: US/09/408,578A
; CURRENT FILING DATE: 1999-09-29
; PRIOR APPLICATION NUMBER: DK PA 1998 01233
; PRIOR FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 17
; TYPE: PR1
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: ESAT-6, 1-17
; OTHER INFORMATION: sequence of Mycobacterium tuberculosis
US-09-408-578A-3
ASAAAEIGAFNMOCETM1

; Sequence 4, Application US/09408578A
; GENERAL INFORMATION:
; APPLICANT: Holm, Arne
; APPLICANT: Jorgensen, Rikke Malene
; APPLICANT: Ostergaard, Soren
; APPLICANT: Thelsen, Michael
; TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
; FILE REFERENCE: 162/P63882US0
; CURRENT APPLICATION NUMBER: US/09/408,578A
; CURRENT FILING DATE: 1999-09-29
; PRIOR APPLICATION NUMBER: DK PA 1998 01233
; PRIOR FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 12
; TYPE: PR1
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Chlamydia
; OTHER INFORMATION: trachomatis DnaK 357-368 sequence
US-09-408-578A-4
KEPMKGVNPDV1

Sequence 5, Application US/09408578A
GENERAL INFORMATION:
APPLICANT: Holm, Arne
APPLICANT: Jorgensen, Rikke Malene
APPLICANT: Theisen, Michael
TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
FILE REFERENCE: 162/P63882U50
CURRENT APPLICATION NUMBER: US/09/408,578A
PRIOR FILING DATE: 1998-09-29
PRIOR APPLICATION NUMBER: DK PA 1998 01233
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 5
LENGTH: 10
TYPE: PR1
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Angiotensin I
US-09-408-578A-5
DRVYHPPFLI

Sequence 6, Application US/09408578A
GENERAL INFORMATION:
APPLICANT: Holm, Arne
APPLICANT: Jorgensen, Rikke Malene
APPLICANT: Theisen, Michael
TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
FILE REFERENCE: 162/P63882U50
CURRENT APPLICATION NUMBER: US/09/408,578A
PRIOR FILING DATE: 1998-09-29
PRIOR APPLICATION NUMBER: DK PA 1998 01233
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 6
LENGTH: 9
TYPE: PR1
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Chlostridium
US-09-408-578A-6
DPTONIPPGI

; Sequence 7, Application US/09408578A
; GENERAL INFORMATION:
; APPLICANT: Holm, Arne
; APPLICANT: Jorgensen, Rikke Malene
; APPLICANT: Ostergaard, Soren
; APPLICANT: Thelsen, Michael
; TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
; FILE REFERENCE: 162/P63882US0
; CURRENT APPLICATION NUMBER: US/09/408,578A
; PRIOR FILING DATE: 1999-09-29
; PRIOR APPLICATION NUMBER: DK PA 1998 01233
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 7
; LENGTH: 4
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic LPA
US-09-408-578A-7
PKKP1

; Sequence 8, Application US/09408578A
; GENERAL INFORMATION:
; APPLICANT: Holm, Arne
; APPLICANT: Jorgensen, Rikke Malene
; APPLICANT: Ostergaard, Soren
; APPLICANT: Thelsen, Michael
; TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
; FILE REFERENCE: 162/P63882US0
; CURRENT APPLICATION NUMBER: US/09/408,578A
; PRIOR FILING DATE: 1999-09-29
; PRIOR APPLICATION NUMBER: DK PA 1998 01233
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 8
; LENGTH: 5
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic LPA
US-09-408-578A-8
SPKKP1

Wed Oct 16 09:20:22 2002

US09408578A.pep

Page 5

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; Sequence 9, Application US/09408578A
; GENERAL INFORMATION:
; APPLICANT: Holm, Arne
; APPLICANT: Jorgensen, Rikke Malene
; APPLICANT: Ostergaard, Soren
; APPLICANT: Theisen, Michael
; TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
; FILE REFERENCE: 162/P63882050
; CURRENT APPLICATION NUMBER: US/09/408,578A
; PRIOR FILING DATE: 1999-09-29
; PRIOR APPLICATION NUMBER: DK PA 1998 01233
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
; LENGTH: 8
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic LPA
US-09-408-578A-9
VAESPCKP1
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; Sequence 10, Application US/09408578A
; GENERAL INFORMATION:
; APPLICANT: Holm, Arne
; APPLICANT: Jorgensen, Rikke Malene
; APPLICANT: Ostergaard, Soren
; APPLICANT: Theisen, Michael
; TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
; FILE REFERENCE: 162/P63882050
; CURRENT APPLICATION NUMBER: US/09/408,578A
; PRIOR FILING DATE: 1999-09-29
; PRIOR APPLICATION NUMBER: DK PA 1998 01233
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
; LENGTH: 9
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic LPA
US-09-408-578A-10
VAESPCKP1
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Sequence 12, Application US/09408578A
GENERAL INFORMATION:
APPLICANT: Holm, Arne
APPLICANT: Jorgensen, Rikke Malene
APPLICANT: Ostergaard, Soren
APPLICANT: Theisen, Michael
TITLE OF INVENTION: METHOD FOR PREPARING A LIGAND PRESENTING ASSEMBLY
TITLE OF INVENTION: (LPA), AND LPA, AND USES THEREOF
FILE REFERENCE: 163/653882USO
CURRENT APPLICATION NUMBER: US/09/408, 578A
CURRENT FILING DATE: 1999-09-29
PRIOR APPLICATION NUMBER: DK PA 1998 01233
PRIOR FILING DATE: 1998-09-29
NUMBER OF SEQ ID NOS: 12
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 12
LENGTH: 10
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Description of Artificial Sequence: Sequence
OTHER INFORMATION: derived from the OSpC protein of Borrelia
OTHER INFORMATION: burgdorferi(reverse orientation of SEQ ID 1)
US-09-408-578A-12
PKRSEAVVPI